ATTORNEY DOCKET No. RFMI01-00213 U.S. SERIAL No. 09/801,411 PATENT

## **IN THE SPECIFICATION:**

Please replace the paragraph on page 1 at lines 6–9 of the specification with the following:

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The present invention is related to the subject matter of commonly assigned, copending U.S. Patent Application No. 09/801,452, which is incorporated herein by reference.

Please replace the paragraphs bridging page 3, line 19 through page 5, line 17 of the specification with the following:

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One approach to increasing the tune range of an oscillator employing a SAW resonator is disclosed in U.S. Patent No. 6,239,664. Within a relatively narrow frequency range, the SAW resonator has an equivalent circuit similar to that of a bulk crystal, as shown in FIGURE 4. Within that frequency range, the equivalent circuit 401 of the SAW resonator includes a series resonator comprising an inductance  $L_M$ , a capacitance  $C_M$  and a resistance  $R_M$  all connected in series, with a shunt capacitance  $C_0$  in parallel with the series resonator and formed by the internal parasitic and package capacitance of the SAW resonator.

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To make the SAW resonator tunable, an inductor  $L_0$  sized to effectively tune out capacitance  $C_0$  is connected in parallel with the SAW resonator 401 and a variable tuning capacitance  $C_{\text{TUNE}}$ , such as a varactor diode, is connected in series with the SAW resonator 401. As the capacitance of tuning capacitance  $C_{\text{TUNE}}$  decreases, the center frequency for the passband of the single port resonator circuit 400 increases.

The frequency range across which the SAW resonator 401 has the equivalent circuit shown, while relatively small, is both larger than the passband of the SAW and large enough to provide the tuning capability required. The disadvantage of the single port SAW resonator circuit 400 is that the circuit 400 has one or more secondary responses 500, as shown in FIGURE 5, because the shunt inductor L<sub>0</sub> resonates with the tuning capacitance C<sub>TUNE</sub> at another frequency (other than the desired passband center frequency). Accordingly, U.S. Patent No. 6,239,664 discloses (not shown in FIGURE 4) an additional inductance and capacitance in conjunction with an amplifier stage to effectively eliminate any secondary responses. Within the passband of the SAW resonator, the SAW resonator circuit 400 provides a low impedance path to ground for the amplifier, forming a Colpitts oscillator. However, the amplifier must present a

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negative resistance which is greater than the resistance of the tuned SAW resonator circuit 400 in order for the circuit to oscillate.

Due to the additional tuning requirements necessary to tune out the secondary response(s), the SAW resonator oscillator disclosed in U.S. Patent No. 6,239,664 is not easily manufactured reliably in quantity, and spurious responses are seen during manufacturing. Moreover, the structure is complex, with the tuning of the inductive coils and the values of capacitances, including the parasitic capacitances, being critical. Finally, the structure is large, requiring a dual in-line package for a practical implementation.

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## **IN THE CLAIMS:**

Please amend the pending claim(s) as follows, substituting any amended claim(s) for the corresponding pending claim(s):